

AMENDMENTS TO THE CLAIMS

- Please delete claim 17.
- Please amend claims 4, 12, and 15 as indicated below. A complete listing of all claims and their status in the application are as follows:

1. (original) A method for manufacturing a switch device, the method comprising:

providing two substrates collectively including a fluid conductor switch device structure and a trench surrounding the fluid conductor switch device structure;
depositing an inner seal material on one of the substrates;
depositing an outer seal material in the trench;
joining the substrates to one another using the inner seal material; and
forming a peripheral hermetic seal between the substrates using the outer seal material.

2. (original) The method of claim 1, in which:
the trench is located in one of the substrates; and
the method additionally comprises:

depositing a first bonding film on the other of the substrates opposite the trench;
and
forming the peripheral hermetic seal includes wetting the first bonding film with the outer seal material.

3. (original) The method of claim 2, in which wetting the first bonding film with the outer seal material includes melting the outer seal material to wet the first bonding film.

4. (currently amended) The method of claim 1, in which:
the trench is located in one of the substrates; and
the method additionally comprises:
 depositing a first bonding film in the trench, and
 depositing a second bonding film on the other of the substrates opposite the
 trench;
depositing the outer seal material in the trench includes depositing the outer seal
material on the first bonding film; and
forming ~~a~~ the peripheral hermetic seal includes melting the outer seal material to wet
the first and second bonding film.
5. (original) The method of claim 1, in which joining the substrates together
includes applying pressure to the inner seal material.
6. (original) The method of claim 5, in which joining the substrates together
additionally includes applying heat to the inner seal material.
7. (original) A method for manufacturing a switch device comprising:
depositing an inner seal material on a first substrate;
forming a channel through the inner seal material into the first substrate;
forming a peripheral trench around and through the inner seal material into the first
substrate;
depositing an outer seal material in the peripheral trench;
providing a second substrate;
disposing a fluid conductor and a fluid non-conductor into the channel;
forming electrodes to the channel;
sealing the inner seal material to bond to the first and second substrates; and
sealing the outer seal material to bond to the first and second substrates.

8. (original) The method as claimed in claim 7, additionally comprising:
depositing a first bonding film in the peripheral trench and bonded to the first substrate;
depositing the outer seal material in the peripheral opening on the first bonding film;
depositing a second bonding film on the second substrate around the periphery thereof;
placing the first and second substrates having the first and second bonding films oppositely positioned along the peripheries of the first and second substrates;
and
pressure and heat sealing the inner and outer seal materials.

9. (original) The method as claimed in claim 7 wherein:
forming the channel forms a plurality of channels through the inner seal material into the first substrate;
forming the peripheral trench forms the peripheral trench around and isolating the plurality of channels;
disposing the fluid conductor includes disposing the fluid conductor into the plurality of channels;
disposing the fluid non-conductor includes disposing the fluid non-conductor into the plurality of channels;
forming the electrodes forms a plurality of electrodes to the channel; and
dicing the first and second substrates along the peripheral opening to form a plurality of devices including the switch device.

10. (original) The method as claimed in claim 7 wherein:
forming a chamber through the inner seal material into the first substrate, the chamber connected to the channel; and
positioning an actuating element in the chamber.

11. (original) A switch device, comprising:
a first substrate;
a second substrate opposite the first substrate, the second substrate and the first substrate collectively including:
a fluid conductor switch device structure, and
a trench surrounding the fluid conductor switch device structure;
inner seal material sandwiched between the first and second substrates; and
outer seal material located in the trench and bonded to the first and second substrates.
12. (currently amended) The switch device of claim 11, in which:
one of the two substrates has ~~a~~the trench provided therein;
the switch device additionally comprises a first bonding film on the substrate having the trench provided therein and a second bonding film on the other of the substrates opposing the trench; and
a peripheral hermetic seal includes the first bonding film bonded with the outer seal material.
13. (original) The switch device of claim 11, in which:
one of the substrates has the trench provided therein;
the switch device additionally comprises:
a first bonding layer in the trench, and
a second bonding layer on the other of the substrates opposite the trench; and
a peripheral hermetic seal includes the outer seal material bonded to the first and second bonding layers.
14. (original) The switch device of claim 11, in which the two substrates are bonded together by the inner seal material.
15. (currently amended) A switch device comprising:
a first substrate having a channel and a peripheral trench provided therein, the channel encircled by the peripheral trench;
a second substrate opposite ~~to~~ the first substrate;
an inner seal material on a first substrate bonded to and bonding the first and second substrates;

an outer seal material in the peripheral trench bonding the first and second substrates;
a fluid conductor in the channel;
a fluid non-conductor in the channel; and
electrodes connected to the channel.

16. (original) The switch device as claimed in claim 15 additionally comprises:

a first bonding film in the peripheral trench and bonded to the first substrate;
the outer seal material in the peripheral trench bonded to the first bonding film;
a second bonding film on the second substrate around a periphery thereof;
the first and second substrates having the first and second bonding films adjacently
positioned along the peripheries of the first and second substrates; and
the outer seal material bonded to the first and second bonding films.

17. (cancelled)

18. (original) The switch device as claimed in claim 15 wherein:
the inner seal material provides a high-pressure seal and a first hermetic seal; and
the outer seal material provides a second hermetic seal.

19. (original) The switch device as claimed in claim 15 wherein:
the first substrate has a chamber provided therein, the chamber connected to the
channel;
an actuating element is in the chamber; and
the inner and outer seal materials and the first and second substrates enclose the
actuating element and the chamber.

20. (original) The switch device as claimed in claim 15 wherein:
the first substrate has first and second chambers provided therein, the first and second
chambers connected to the channel;
an actuating element is in the first and second chambers; and
the inner and outer seal materials and the first and second substrates enclose the
actuating element and the first and second chambers.